

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS/ISO 9248 (1992): Earth-moving Machinery - Units for Dimensions, Performance and Capacities, and Their Measurement Accuracies [MED 7: Material Handling Systems and Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

मृदा-संचालन मशीनरी — आयाम, निष्पादन और धारिता के
लिये यूनिटें तथा उनकी मापन परिशुद्धता

Indian Standard

**EARTH-MOVING MACHINERY — UNITS FOR
DIMENSIONS, PERFORMANCE AND
CAPACITIES, AND THEIR MEASUREMENT
ACCURACIES**

ICS 53.100

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BUREAU OF INDIAN STANDARDS
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NATIONAL FOREWORD

This Indian Standard which is identical with ISO 9248 : 1992 'Earth-moving machinery — Units for dimensions, performance and capacities, and their measurement accuracies', issued by International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of Bulk Handling Systems and Equipment Sectional Committee and approval of the Heavy Mechanical Engineering Division Council.

The text of ISO standard has been approved for publication as Indian Standard without deviations. Certain terminology are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as a decimal marker.

In this adopted standard, reference appears to ISO 6165 : 1987 'Earth-moving machinery — Basic types — Vocabulary' for which Indian Standard also exists. The corresponding Indian Standard which is identical with International Standard and shall be substituted in its place is IS 12138 : 1993 'Earth-moving machinery — Basic types — Vocabulary (*first revision*)'.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'.

ADDITIONAL INFORMATION

In this adopted standard, reference also appears to ISO 1000 : 1981 'SI units and recommendations for the use of their multiples and of certain other units' for which Indian Standard also exists. The corresponding Indian Standard which is identical with this International Standard and shall be substituted in its place is IS 10005 : 1985 'SI units and recommendations for the use of their multiples and of certain other units (*first revision*)'.

*Indian Standard***EARTH-MOVING MACHINERY — UNITS FOR
DIMENSIONS, PERFORMANCE AND
CAPACITIES, AND THEIR MEASUREMENT
ACCURACIES****1 Scope**

This International Standard specifies basic units, symbols and tolerances for the measurements of general machine dimensions, performance and capacities of earth-moving machinery as defined in ISO 6165.

It does not cover methods and instrumentation to be used.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6165:1987, *Earth-moving machinery — Basic types — Vocabulary*.

3 Units

Basic and derived units for earth-moving machinery shall be as specified in table 1.

4 Accuracy

The accuracy of measurements shall be within the tolerances specified in table 1.

5 Rounding off

The rounding off of measurement results shall be done by adding or subtracting numerical values compatible with the specified tolerance.

Table 1 — Measurement accuracy

NOTE 1 Basic and derived units and symbols in table 1 have been taken from ISO 1000:1981, *SI units and recommendations for the use of their multiples and of certain other units*.

Quantity	Unit	Symbol	Tolerance ¹⁾
Basic units			
Linear dimension	metre	m	± 0,5 %
Mass	kilogram	kg	± 2 %
Time	second	s	± 1 %
Celsius temperature	degree Celsius	°C	$\left\{ \begin{array}{l} \leq 200 \text{ }^{\circ}\text{C}: \pm 1 \text{ }^{\circ}\text{C} \\ > 200 \text{ }^{\circ}\text{C}: \pm 2 \text{ \%} \end{array} \right.$
Angle	radian	rad	± 0,02 rad
Frequency	hertz	Hz	± 1 %
Derived units			
Area	square metre	m ²	± 2 %
Volume	cubic metre	m ³	± 3 %
	litre ²⁾	l, L	
Force	newton	N	± 1 %
Pressure	pascal	Pa	± 2 %
Power	watt	W	± 2 %
Angular velocity	radian per second	rad/s	± 2 %
Speed	metre per second	m/s	± 2 %
Acceleration	metre per second squared	m/s ²	± 2 %
Torque	newton metre	N·m	± 2 %
Energy	joule	J	± 2 %
Volumetric rate	cubic metre per second	m ³ /s	± 2 %
Sound pressure level	decibel (ref. 20 µPa)	dB	± 1 dB
1) These tolerances also apply to other units used for the same quantity. Tolerances for specific quantities not covered in this International Standard, on a larger or a smaller scale, or for precision measurements, shall be specified in the individual International Standards which require them. 2) 1 l = 1 dm³			

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards Monthly Additions'.

This Indian Standard has been developed from Doc : No. HMD 7 (5096).

Amendments Issued Since Publication

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